#### **CURRENT CONDITIONS SUMMARY**

DELPHI CORPORATION
DELPHI AUTOMOTIVE HOLDINGS GROUP
DELPHI FLINT EAST WASTEWATER TREATMENT PLANT
FLINT, MICHIGAN

**US EPA ID #MID980568570** 

by

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for

**Delphi Corporation Troy, Michigan** 

File No. 33520-012 15 December 2006



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#### 1. INTRODUCTION

Haley & Aldrich, Inc. (Haley & Aldrich) prepared this Current Conditions Summary (CCS) under the direction of Delphi Corporation, for their Delphi Flint East Wastewater Treatment Plant. The United States Environmental Protection Agency (U.S. EPA) ID Number for the Site is # MID980568570. The Site is located at 3026 Robert T. Longway Boulevard in Flint, Michigan (Figures 1 and 2). This CCS was prepared to aid Delphi in characterizing potential releases of hazardous waste, hazardous constituents, hazardous substances and/or petroleum products at the Site.

The current environmental conditions at Delphi Corporation's Wastewater Treatment Plant ("Site") (Figure 1) were assessed by reviewing Site and regulatory agency files; interviewing site personnel; reviewing historic aerial photographs; and observing and documenting current conditions through several site visits. Through this process we identified 12 areas were identified where hazardous waste, hazardous constituents, hazardous substances and/or petroleum products were potentially treated, stored or disposed (released). These areas are identified as Areas of Interest (AOIs).

AOIs where a release of hazardous waste, hazardous constituents, hazardous substances and/or petroleum products is known or is probable are recommended for further investigation. This information is summarized in the enclosed matrix of AOIs and corresponding figure (Table 1 and Figure 2).



#### 2. FACILITY BACKGROUND

Delphi Flint East Wastewater Treatment is located at 3026 Robert T. Longway Boulevard in Flint, Genesee County, Michigan (Figure 1). The Site is approximately 5 acres with approximately 8,065-square feet of floor space. Buildings present at the Site include the Laboratory/Quality Control Building, the Filter Building, and several sheds. The Site also maintains several large detention basins and above ground tanks.

The Site was first developed in 1956 and has been used for process wastewater treatment since its inception. From 1956 until 1999, the Site was owned by various divisions of General Motors (GM). In January 1999, Delphi Automotive Systems separated from GM to form a new company. Later, the company was renamed Delphi Corporation. The Site currently operates as the Delphi Automotive Holdings Group Division of Delphi Corporation.

Past and current activities at the Site are:

- 34 Process and treat wastewater
- 3/4 Monitor stormwater

Based on a review of the site processes and activities, the general classes of chemicals that may have or are currently used at the Site or received in the waste stream from the Flint-East manufacturing facilities include;

- Petroleum products including various oils (quench, soluble, non-soluble, grinding, cutting, hydraulic, lubricating, gasoline, diesel).
- 3/4 Acids
- 3/4 Bases
- Metals including chromium, copper, nickel, zinc and cyanide.
- 3/4 Semi-Volatile Organic Compounds
- 3/4 Volatile Organic Compounds including chlorinated and non-chlorinated solvents.
- **Polychorinated Biphenyls (PCBs)**
- **34 Various Specialized compounds.**

A summary of the general materials used at each AOI is included in Table 1.

Potable and combined sewer services are supplied by City of Flint municipal water supply. Process wastewater from the Flint East manufacturing plants is treated at the Site and is then discharged to Outfall 001.

Stormwater collected from Flint East manufacturing plants and the Site is discharged to Gilkey Creek (Outfall A-1). The outfall to Gilkey Creek is located along the southern property boundary of the Site and is approximately 100 feet south of the southern most storage tank. Gilkey Creek flows to the Flint River approximately 1.5 miles west of the Site.



The Site's EPA Generator ID Number is MID980568570. The Site operates as a RCRA "Large Quantity Generator" due to the generation of process wastewater treatment sludge. No other hazardous wastes are generated.

Previous subsurface investigations at the Site indicate that fill dirt is present beneath the Site from 0 to 4.5 feet below ground surface (bgs). Clay was encountered at 4.5 to 14.5 feet bgs. Saturated gray sand was observed from depths of 14.5 feet bgs to 20 feet bgs. This sand was silty and clayey in parts, grading to clay at 20 feet bgs. Water saturated soils were encountered from 14 feet to 16 feet bgs. This soil lithology is consistent with the Wisconsin Glacial drift, which outcrops in Genesee County.

The Quaternary Geology Map of Southern Michigan (Michigan Department of Natural Resources/MDNR, 1982) indicates that the Site overburden is comprised of gray to dark reddish brown lacustrine clay and silt. These unconsolidated strata typically underlie the flat, low-lying areas formerly inundated by the glacial Great Lakes. According to the Centennial Geological Map of the Southern Peninsula of Michigan (MDNR, 1936), the unconsolidated glacial sediments are underlain by bedrock of the Pennsylvanian Saginaw Series. The Series consists of the Upper and Lower Saginaw and Verne Limestone Formations. These are predominantly carbonate sedimentary units. The top of bedrock in the area is reported to be typically 100 to 150 feet below surface grade.

The upper unconsolidated glacial deposits beneath the Site represent the primary interest with respect to assessment of groundwater conditions. Based on Gilkey Creek and previous investigations at or near the Site, the water table is anticipated to be between 4 to 10 feet below ground surface. The direction of groundwater flow has not been confirmed.

Based on the regional and property topography, surface runoff in the vicinity of the Site drains generally to the south toward Gilkey Creek, which is situated along the Facilities' southern property boundary. Gilkey Creek is a perennial stream that flows toward the west where it joins the Flint River, approximately 1.5 miles west of the Site. The relationship of site groundwater and surface water has not been confirmed.



#### 3. AREAS OF INTEREST

Areas of Interest are areas associated with the Site where evidence of past treatment, storage or disposal (or release) of hazardous waste, hazardous constituents, hazardous substances and/or petroleum products is known or probable to have occurred. The AOIs identified during the preparation of this CCS are summarized in Table 1.



#### 4. INFORMATION REVIEWED

To identify AOIs, Haley & Aldrich, Inc. reviewed Delphi's records of spills and releases, environmental sampling data, process descriptions and diagrams, and Site figures.

The following reports were also reviewed to identify potential AOIs:

Results of Investigation Waste Oil Tank, AC Rochester Flint East, Wastewater Treatment Plant dated October 1992, prepared by Environmental Consulting & Technology, Inc.

Site Assessment Report, AC Delco Systems Division, Wastewater Treatment Plant dated 25 October 1994, prepared by Techna Corporation.

A Site visit and interview with Alton Putney, Environmental Engineer was conducted on 2 August 2006. During the Site visit, Delphi personnel knowledgeable of current or past operations accompanied the Haley & Aldrich representative. Material Safety Data Sheets (MSDSs) for chemicals currently used in manufacturing and maintenance activities at the Site were obtained from Delphi Site personnel and reviewed for RCRA-regulated constituents and other hazardous substances.

Files maintained by the Michigan Department of Environmental Quality (MDEQ) Lansing District Office were accessed through a request submitted under the Freedom of Information Act. Additionally, an environmental database search was performed with an ASTM expanded radius of the Site. Sanborn fire insurance maps were requested but coverage was not available. Aerial photographs for 1941, 1950, 1964, 1972, 1982, 1992, and 1997 were also reviewed to identify potential environmental issues.



5. SELECTION CRITERIA FOR AOIS REQUIRING ADDITIONAL INVESTIGATION

As stated above, AOIs are areas associated with the Site where evidence of past treatment, storage or disposal of hazardous waste, hazardous constituents or petroleum products is known or probable to have occurred. The identification of AOIs retained for further investigation was based on the following:

- 1. Areas with a confirmed release to the environment.
- 2. Areas with a probable release based on visual evidence or interview with knowledgeable personnel.
- 3. Areas where a release to the environment is possible because a release pathway could not be ruled out. For example, where highly corrosive materials were used and impact of water discharging into sumps or trenches may have resulted in degradation of the integrity of that system and no evidence to the contrary was available, such systems were considered Areas of Interest warranting further investigation.
- 4. Areas with the likely presence of free product, regardless of its composition.

Any AOIs that were initially identified using the criteria set forth above were upon further inquiry eliminated from further investigation based on the following:

- 1. Areas where no release pathway to the environment was identified or no evidence of release was observed, documented, reported, or suspected.
- 2. Areas where, based on the volumes of materials managed, the potential for release was considered de minimis.

Based on the results of this study further investigation is recommended as detailed in Table 1. The details of the inspection and sampling program will be presented in a Field Investigation Work Plan.



### 6. CONCLUSIONS

AOIs have been identified by reviewing Delphi records, observing site conditions, and interviewing Delphi personnel with knowledge of current and historic site operations. Further investigation is recommended.



#### 7. APPLICABLE ENVIRONMENTAL REGULATIONS

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

The Site is subject to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, and Part 201 of Michigan's Natural Resources and Environmental Protection Act (NREPA). These laws facilitate the remediation of abandoned waste sites. CERCLA places liability on responsible parties who 1) own a site where hazardous substances were disposed or abandoned, 2) previous owners at the time the hazardous substances were disposed or abandoned, 3) parties who contributed hazardous substances for disposal at the site, and 4) transporters of hazardous substances that select the site for disposal. The courts have interpreted CERCLA to impose liability for all responsible parties regardless of fault.

Under CERCLA, the USEPA has the power require responsible parties take a response action or to pay for such actions if the regulator takes action. The costs of this response action may include cleanup costs, enforcement costs, government oversight costs, and natural resources damages.

This Site is not currently undertaking a CERCLA or a Part 201 action.

Resource Conservation and Recovery Act of 1976 (RCRA)

The Resource Conservation and Recovery Act (RCRA) provides comprehensive federal regulation of hazardous wastes from point of generation to final disposal ("cradle to grave"). All generators of hazardous waste must comply with all the applicable requirements of the statute. Any facility that applied for or has interim status or is a permitted transporter, storage or disposal facility (TSDF) is subject to corrective action under RCRA at the entire facility.

Part 111 of NREPA, as amended, addresses the requirements for generators of hazardous wastes and certain Corrective Action sites in the State of Michigan.

The Michigan Delphi facilities are subject to Corrective Action requirements under RCRA or Part 111. The Site operates as a RCRA "Large Quantity Generator" which does not subject the site to Corrective Action. Based upon site documents, the Site did apply for an EPA Part A application in November 1980. A Site letter to the Michigan Department of Natural Resources (MDNR) dated 10 April 1989, requested that the Part A Permit be withdrawn due to the fact that Site, as a pre-treatment site that discharges to the City of Flint sanitary sewer, is excluded from RCRA permitting requirements. The letter, which was signed by the General Manager of the Flint East manufacturing plants, also certified that the Site never stored, treasferred, treated, nor disposed any hazardous wastes. The MDNR responded in writing on 18 April 1989 stating that the site "is not subject to the licensing requirements of the federal Resource Conservation and Recovery Act or the Michigan Hazardous Waste Management Act. The Part A withdrawal is, therefore, approved."



Based on this information, it does not appear that the Site is subject to RCRA Corrective Action.

Clean Water Act

The Clean Water Act provides federal regulation of all sources of water pollution. The primary means of obtaining national water quality is through the National Pollutant Discharge Elimination System (NPDES) permits on all facilities that discharge pollutants into the waters of the United States. The Clean Water Act also establishes Ambient Water Quality Standards for the protection of human and ecological health.

Part 31 of NREPA as amended addresses the requirements for protection of surface water in the State of Michigan.

Although primarily administrative, this Delphi site may have requirements to eliminate NPDES discharges upon closure of the site.

**Toxic Substances Control Act (TSCA)** 

The Toxic Substances Control Act (TSCA) regulates the manufacture, processing, and distribution in commerce of chemical substances and mixtures capable of adversely affecting health or the environment. Regulations promulgated under TSCA contain requirements for the labeling, disposal, storage, spill response, cleanup criteria, and incineration of Polychlorinated Biphenyls (PCBs), among other substances.

The presence of PCBs at concentrations that have the potential to trigger TSCA requirements have not been detected in environmental media.

Michigan Natural Resources and Environmental Protection Act (NREPA)

Michigan Public Act 451 of 1994, as amended, is the Natural Resources and Environmental Protection Act (NREPA) and compiles environmental laws of the State of Michigan. Four parts of NREPA were identified that may apply to closure of the facility: Hazardous Waste Management (Part 111), Environmental Response (Part 201), Leaking Underground Storage Tanks (Part 213), and Water Resources Protection (Part 31).

Michigan Part 111 of NREPA. (Hazardous Waste Management)

Michigan Part 111 of NREPA (Part 111) is the Michigan State equivalence to RCRA. Michigan is a delegated state responsible for administration of hazardous waste management activities with the state. Part 111 is consistent with RCRA and regulates generators, transporters and disposal activities within Michigan.

Part 111 regulates waste management, the management and closure of accumulation tanks and areas (< 90 day accumulation), and interim status of treatment and disposal units and the



management of satellite accumulation areas. Sites with regulated units can be subject to corrective action requirements for the entire facility under Part 111.

Under Part 111, RCRA-regulated units require certification of closure to assure that hazardous constituents have been removed. This requirement can require the removal of hazardous constituents to concentrations equal to or less than background concentrations ("Clean Closure") or to concentrations of hazardous constituents to levels protective of human-health and the environment. Closure of regulated units to levels protective of human-health and the environment can be achieved through the use of generic cleanup criteria.

Based on memorandum from Norman Niedergang, Director of Waste, Pesticides, and Toxics Division, (U.S. EPA Region V), to Jim Sygo, Chief of Waste Management Division, (Michigan DEQ), dated June 5, 1998 the U.S. EPA Region V acknowledged and recognized Michigan's intention to use the Part 201 Generic Cleanup Standards in the administration of the State' hazardous waste management program (Part 111), including the regulated unit closure and corrective action portions of the program at both licensed and interim status facilities. This understanding was limited to the use of Michigan Part 201 Generic Cleanup Criteria themselves and as they are utilized in the hazardous waste management program under Part 111. Michigan Part 201 (discussed below) does not affect Part 111. A memorandum of understanding was signed between the U.S. EPA and Michigan DEQ in November 2000. Indicating that the U.S. EPA would generally not take lead action pursuant to RCRA Corrective Action at facilities being addressed by the MDEQ under Part 201 and 111 unless,

- **"Region 5 determines that the site may pose an imminent and substantial endangerment to public health, welfare, or the environment;**
- The facility owner or Operator fails to properly implement a course of action required by the MDEQ;
- The facility is subject to an existing federal (administrative or judicial) order for cleanup;
- The facility is listed on, or proposed for listing on, the USEPA's National Priorities List and sites where Region 5 has submitted a Hazard Ranking Scoring package to USEPA Headquarters, unless the site is eligible for a deferral under the RCRA/Comprehensive Environmental Response, Compensation, and Liability Act deferral policy dated July 1,1995, EPA Doc. No. 540-R-95-002g;
- The exercise of federal authority is necessary for Region 5 to meet its legal responsibilities."

Based on site personnel interview and site document review, there are no known USTs remaining at the Site.

Part 201 of NREPA (Environmental Response)

The intent of Part 201 of NREPA (Part 201) is to protect the environment and natural resources, establish liability for environmental releases, regulate the response to the release of hazardous substances into the environment, waters, and provide for charges, fees, and penalties, and provide remedies. Part 201 provides means by which to eliminate liability



associated with the purchase of property with environmental contamination but establishes "Due Care" obligations associated with the property. Pertinent information from Part 201 that may be applicable to this Site include:

- Part 201 defines a "facility" as a location where a hazardous substance is present "in excess of the concentrations which satisfy the requirements of section 20120a(1)(a) or (17).
- Part 201 defines liable party based on causation for a release or purchase of property without performing a baseline environmental assessment.
- Part 201 establishes generic cleanup criteria (GCC) for applicable exposure pathways such as groundwater protection, surface water protection, inhalation, and direct contact. Generic criteria for these pathways were developed for multiple land use scenarios such as residential, commercial and industrial. These criteria (Michigan Part 201 Generic Cleanup Criteria (GCC)) are used in Section IV to determine if an area may be a "facility."
- **Use of exposure barriers instead of remediation to generic criteria is allowed under** Part 201.

Previous soil and groundwater chemical data were reviewed and compared to Part 201 GCC. Based on this review, the Site is classified as a facility and is thus subject to management of the site under Part 201 of Public Act 451 of 1994, as amended, of NREPA.

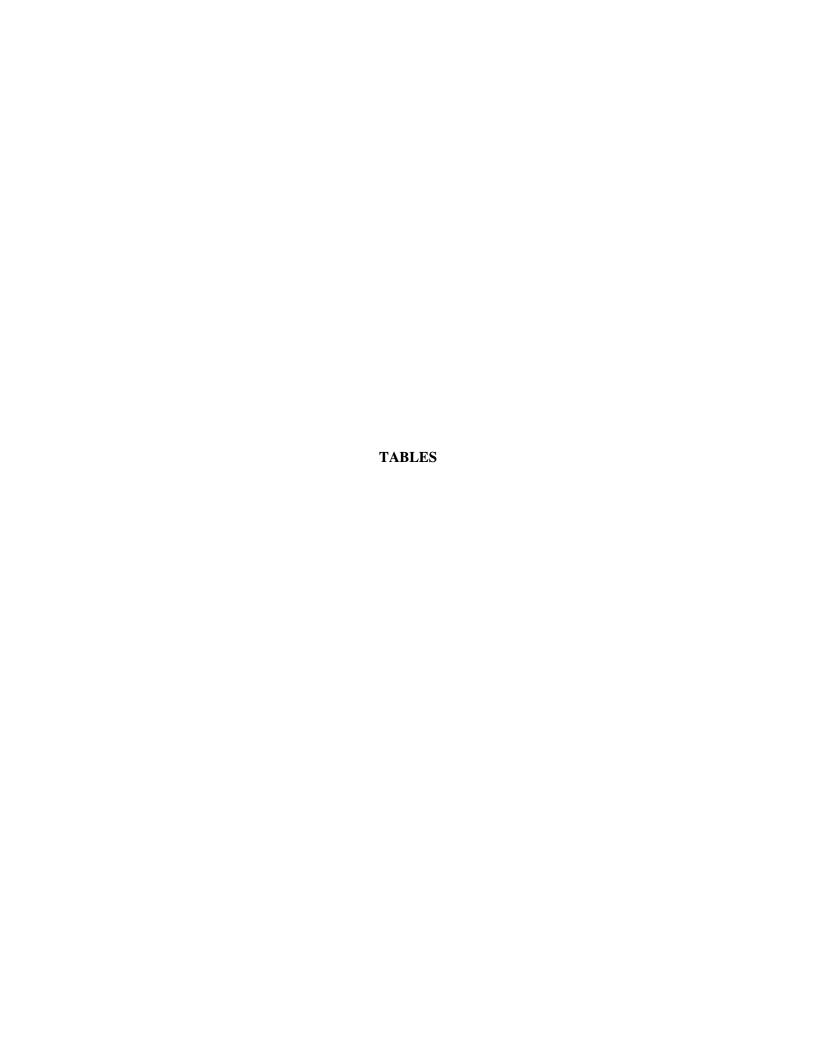
Part 213 of Public Act 451 of 1994 as amended (Leaking Underground Storage Tanks)

Part 213 of Public Act 451 of 1994, as amended, of NREPA (Part 213) addresses leaking underground storage tanks (LUSTs). Part 213 is intended to provide remedies for sites posing a threat to the public health, safety, or welfare and the environment caused by a release(s) of regulated substances from LUSTs.

Based on site personnel interview and site document review, there are no known LUSTs currently at the Site.

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# TABLE 1 SUMMARY OF AREAS OF INTEREST FLINT-EAST, WASTEWATER TREATMENT PLANT FLINT. MICHIGAN

Areas of Interest	AOI Description	Summary of Materials Managed	Release Potential Evidence	Summary of Relevant Existing/Available Analytical Data (units = mg/kg or mg/l)	Further Investigation Recommended	Process/Equipment Status	Additional Information/Summary of Data Gaps
AOI-01	Process Wastewater Sump	- Process Wastewater from Flint- East Operations	Sump in existence since inception of WWTP (1956). According to site personnel, during recent inspections sump was reportedly in deteriorated condition. Sump was then lined with stainless steel. As such, integrity of sump could not be assessed during site walk.	None	Yes	Active	-
AOI-02	Process Wastewater Basins	- Process Wastewater from Flint East	Process Wastewater Basin used to blend incoming process wastewater prior to treatment. According to site personnel, the process wastewater basin has overflowed in the past. Amount of spills unknown.	None	Yes	Active	-
AOI-03	Cyclator Pit	- Final Process in Wastewater prior to discharge (clarified wastewater)	Cyclator Pit is used to clarify process wastewater and is the final step prior to discharging wastewater to outfall. The clarified wastewater is pumped into the Cyclator Pit then to Outfall 001 at Gilkev Creek.	None	No	Active	-
AOI-04	Former Used Oil UST	- Used Oil	Former 3,500 UST (#4042) used to store oil from oil separation process at WWTP. Upon removal of UST in 1990, soil sample were collected and analyzed for TPH. No regulatory closure documents were found.	Soil: TPH range = 240-6,700 mg/kg	Yes	Inactive. Removed 1990.	-
AOI-05	Used Oil AST	- Used Oil	This AST (#4047) was installed when the Former Used Oil UST (AOI-04) was removed. This 4,000 gallon AST (site records also indicate 5,500-gallon capacity) is located withir a large concrete vault that is used as secondary containment. No staining or breaches were observed during the site visit.	None	No	Active	-
AOI-06	Sodium Hypochlorite and Ferrous Sulfate Storage Tanks (#4040 and #4041)	- Sodium Hypochlorite - Ferrous Sulfate	Tanks were removed in 1994 and replaced with ASTs. No evidence of leakage was noted during cleaning of tanks. Soil and groundwater samples collected during removal did not indicate any impact had occurred as a result of the former USTs.	Composite soil and groundwater samples were collected during excavation. Samples analyzed for pH, sodium, nickel, and iron. Sodium was above groundwater cleanup criteria. According to the Site Assessment Report prepared by ECT in October 1994, the sodium hypochlorite tank was structurally sound and passed the tightness test in January 1994. It was believed that the elevated sodium concentrations were due to deicing operations during winter months. Soils above the former USTs were unpaved and the grade in the area was known to slope towards the former USTs.	No	Inactive. USTs removed 1994 and replaced with ASTs.	-
AOI-07	Metal Bearings Shed	- Process wastewater	Hydraulic pumps and sump are located in the Metal Bearings shed to support Metal Bearings Waste Tank. According to site personnel, pumps have leaked hydraulic oil during repair. During the site visit, some staining was observed on the concrete floor. However, concrete appeared to be in good condition.	None	No	Active	-
AOI-08	Metal Bearings Tanks	- Process Wastewater	Two, 300,000 gallon storage tanks located on south side of plant. No known issues or spills associated with storage tanks.	None	No	Active	-
AOI-09	Cyanide Waste Tanks	- Process Wastewater from Plant 400 Cyanide Lift Station	Two, 200,000 gallon storage tanks are no longer in operation. According to site personnel, several spills from tanks have occurred. Surface surrounding tanks is gravel. Investigation of this area will be captured under the groundwater investigation (AOI 12).	None	Incuded as part of groundwater investigation (AOI 12)	Inactive	-
AOI-10	Oil Storage	- New Oil	Approximately six, 25-gallon oil dispensing tanks are stored on a steel storage rack within the filter building for use of general maintenance. No secondary containment was observed around the steel rack. Some staining was observed beneath the dispensing tanks. Facility records also indicate an 800-gallon Used Oil AST (#4067) in the filter building. Surface in the area appeared to be in good condition.	None	No	Active	
AOI-11	WWTP Stormwater Outfall	- Flint East stormwater	Outfall A-1 at Gilkey Creek is the final discharge point for Flint East process wastewater after treatment. In addition, during heavy rain events, pumps that divert stormwater to WWTP can shut down. The initial stormwater slug is captured but flow thereafter until pumps are reset is discharged directly to Gilkey Creek.	None	Yes	Active	-
AOI-12 Notes	Sitewide Groundwater		Sitewide groundwater is considered an AOI to allow more holistic approach to investigation.	None	Yes	N/A	-

- A PA/VSI for WWTP does not appear to have been conducted.
   The site-walks were conducted on 01 August 2006, 02 August 2006, and 22 August 2006.



